



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION IV  
611 RYAN PLAZA DRIVE, SUITE 400  
ARLINGTON, TEXAS 76011-8064**

March 31, 2000

C. Randy Hutchinson, Vice President  
Operations  
Arkansas Nuclear One  
Entergy Operations, Inc.  
1448 S.R. 333  
Russellville, Arkansas 72801-0967

**SUBJECT: PLANT PERFORMANCE REVIEW - ARKANSAS NUCLEAR ONE,  
UNITS 1 AND 2**

Dear Mr. Hutchinson:

The purpose of this letter is to communicate our assessment of your performance and to inform you of our planned inspections at your facility. On March 2, 2000, we completed a Plant Performance Review (PPR) of Arkansas Nuclear One, Units 1 and 2. We conduct these reviews to develop an integrated overview of the safety performance of each operating nuclear power plant. We use the results of the PPR in planning and allocating inspection resources and as inputs to our senior management meeting (SMM) process. This PPR evaluated inspection results and safety performance information for the period from January 25, 1999, through February 11, 2000, but emphasized the last 6 months to ensure that our assessment reflected your current performance. Our most recent summary of plant performance at Arkansas Nuclear One was provided to you in a letter dated March 19, 1999.

The NRC has been developing a revised reactor oversight process that will replace our existing inspection and assessment processes, including the PPR, the SMM, and the Systematic Assessment of Licensee Performance (SALP). We recently completed a pilot program for the revised reactor oversight process at nine participating sites and are making necessary adjustments based on feedback and lessons learned. We are beginning initial implementation of the revised reactor oversight process industry-wide, including your facility, on April 2, 2000.

This PPR reflects continued process improvements as we make the transition into the revised reactor oversight process. You will notice that the following summary of plant performance is organized differently from our previous performance summaries. Instead of characterizing our assessment results by SALP functional area, we are organizing the results into the strategic performance arenas embodied in the revised reactor oversight process. Additionally, in assessing your performance, we have considered the historical performance indicator data that you submitted in January 2000 in conjunction with the inspection results. The results of this PPR were used to establish the inspection plan in accordance with the new risk-informed inspection program (consisting of baseline and supplemental inspections). Although this letter incorporates some terms and concepts associated with the new oversight process, it does not reflect the much broader changes in inspection and assessment that will be evident after we have fully implemented our revised reactor oversight process.

During the last 6 months, Unit 1 shut down three times to address plant material condition issues, including replacement of main turbine trip oil system diaphragms to address industry identified problems with these diaphragms, repair of an oil leak on Reactor Coolant Pump D, and replacement of the antirotation device on Reactor Coolant Pump D. Unit 1 also shut down to perform Refueling Outage 1R15.

During this assessment period, with the exception of a plant shutdown to conduct steam generator tube inspections, Unit 2 operated at or near full power.

Arkansas Nuclear One's implementation of programs in the reactor safety strategic performance arena demonstrated overall safe plant operations. However, exceptions to effective implementation of programs within the reactor safety strategic performance area were observed. Concerns were noted with your implementation of the emergency diesel generator reliability monitoring program, plant material condition, and engineering support of plant operations. These issues also resulted in concerns with Arkansas Nuclear One's problem identification and resolution processes. These areas of concern will be a focus for baseline inspections conducted during the next assessment period. At the end of the assessment period, a special inspection was in progress to review the inoperability of both Unit 1 low pressure injection/decay heat removal pumps. Unit 1 operators discovered that, when they attempted to place the pumps in service for decay heat removal, bearing temperatures increased to above the alarm setpoint. Inspection and resolution of this issue will be addressed under the previous oversight and enforcement process.

We did not identify any significant performance issues in the radiation safety or safeguards strategic performance areas. As a result, only baseline inspections are planned.

During the next assessment period, inspections associated with the Unit 1 license renewal application and the replacement of the Unit 2 steam generators will be conducted. In addition, an inspection to close out unresolved items from the safety system engineering inspection (SSEI) will be performed.

Enclosure 1 contains a historical listing of plant issues, referred to as the Plant Issues Matrix (PIM), that were used during this PPR process to arrive at our integrated view of your performance trends. The PIM for this assessment is grouped by the prior SALP functional areas of operations, maintenance, engineering, and plant support, although the future PIM will be organized along the cornerstones of safety as described in the revised reactor oversight process. The attached PIM includes items summarized from inspection reports or other docketed correspondence regarding Arkansas Nuclear One. We did not document all aspects of licensee programs and performance that may be functioning appropriately. Rather, we only documented issues that we believe warrant management attention or represent noteworthy aspects of performance. In addition, the PPR may also have considered some predecisional and draft material that does not appear in the attached PIM, including observations from events and inspections that had occurred since our last inspection report was issued but had not yet received full review and consideration. We will make this material publically available as part of the normal issuance of our inspection reports and other correspondence.

Enclosure 2 lists our planned inspections for the period April 2000 through March 2001 at Arkansas Nuclear One to allow you to resolve scheduling conflicts and personnel availability in

advance of our inspector arrival onsite. The inspection schedule for the latter half of the period is more tentative and may be adjusted in the future due to emerging performance issues at Arkansas Nuclear One or other Region IV facilities. We also included some NRC noninspection activities in Enclosure 2 for your information. Routine resident inspections are not listed due to their ongoing and continuous nature.

We will inform you of any changes to the inspection plan. If you have any questions, please contact me at (817) 860-8250.

Sincerely,

Original Signed By:  
Kriss M. Kennedy for PHH

P. Harrell, Chief  
Project Branch D  
Division of Reactor Projects

Docket Nos.: 50-313  
50-368

License Nos.: DPR-51  
NPF-6

Enclosures:

1. Plant Issues Matrix
2. Inspection Plan

cc w/enclosures:

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